

# Bubbling Biology—How Plants, Animals and Microscopic Organisms Live, Grow and Survive

## Grades 3-5 (8 book set and board game)

Calling all budding biologists! Organisms have certain features or characteristics that allow them to live successfully and survive in their unique habitats. This collection will take you on a fun journey as you embark on a field trip through the skies, look at animal characteristics through a camera lens, create 3D animal models and participate in fantastic hands-on activities. Discover a whole new way of seeing the world!

**Books in this set:** Bubbling Biology, It's a Fungus Among Us, Open Wide, Up Close Fur & Feathers, Bird Brains, Pattern Play

**Learning Objectives:** Students will be able to identify characteristics of living things and how they adapt for survival, compare and contrast living things and understand the symbiotic relationship between living things.

### Essential Questions in this unit:

- What is biology?
- What does it mean to be living?
- What are the three kingdoms of living things?
- What do living things need to survive?
- How do the parts of living things help them to survive?
- How does studying cycles help us to understand natural processes?
- How do living things adapt to the environment?
- How do living things need each other?

All of the books in this set will give you a deep understanding of how plants, animals and some microorganisms live grow and survive. Read through the books in the **Bubbling Biology** set to find out...

1. As you read keep a journal of new and interesting fact that you learned.
2. What do living things need to live and grow and thrive? Find specific answers for plants, animals and fungi.
3. How do living things use their body parts to get the things they need to live and grow? Find specific examples for plants, animals and fungi.
4. What is a life cycle?
5. Why are life cycles of plants, animals and fungi important for life on Earth to continue?
6. How do different animals go through a cycle in their lifetimes?
7. How do we measure changes in living things over time? Discuss changes in plants, animals and fungi.
8. Has technology impacted our ability to track change? How?
9. How have you changed over time? How do you know you are growing and changing?

10. How are traits in organisms passed from one generation to another? How does growth show a pattern?
11. How are the animals that we study alike and different from humans?
12. What is a bird?
13. Where do birds live?
14. How do birds solve problems?
15. Why is the bird song so important?
16. How do birds use their brains to survive?
17. How do you use your brain to survive?
18. Why do plants, animals and fungi need the parts that they have?
19. How do animals use their body parts to get the things they need to live and grow?
20. How are humans and other animals dependent upon one another?
21. What is a food chain and where do we find them?
22. How do we keep our bodies healthy?
23. What is a food pyramid and why is it important?
24. Read **Open Wide** to explain the importance of teeth.
25. What would happen to specific animals if they did not have teeth?
26. What do teeth tell us about an animal?
27. What kinds of patterns can you find around you?
28. How do patterns enable species to survive?
29. Read through the book **Pattern Play**. Discuss animals that have patterns.
30. How do patterns help animals survive? How does the habitat of an animal impact patterns?
31. Describe some characteristics of fungi.
32. Compare and contrast the fungi with plants and animals in terms of body plan and life cycle.
33. Why are fungi important to food chain?
34. Why are fungi important to people?
35. Compare and contrast fungi and plants.
36. Draw and label the anatomy of a mushroom.
37. Why is a fungus considered the fastest organism on Earth?
38. Why do fungi survive in harsh habitats where most plants and animals cannot? Name some of the harsh habitats.
39. How are plants and animals dependent on fungi?
40. After reading It's **a Fungus among** us describe something you found to be good, bad and downright scary from the book.

### Activities

1. Choose an animal that you found interesting in your reading. Create a PowerPoint presentation using the following information:
  - ~ What is the weather like in this animal's habitat?
  - ~ How does this animal find shelter?
  - ~ How does this animal find food?
  - ~ Does this animal have any predators?
  - ~ What behaviors show this animal has "adapted" to its environment?
  - ~ What would happen if the animals switched habitats?

- ~ What adaptation features would be useful or useless in the new habitat? Do you think the animal could survive in the unfamiliar habitat?
  - ~ What does that tell you about how animals adapt to their environments?
2. Create a food chain using animals, plants and fungi.
  3. Research an invention or innovation that helps scientists learn about, measure changes, and study adaptations of livings. For example, scientists have a special program called a “StripeSpotter” that scans and sorts zebra photographs. This tool answers one of nature’s biggest mysteries... every zebra has a unique pattern.
  4. Create an impressive pattern from something in nature. Write a paragraph about the pattern and the materials you used.
  5. Create a recipe using fungus. (Yeast, mushrooms, cheese). Bring it in to share.
  6. Take your facts from your journal and write them in question form. Have a biology trivia contest.
  7. Plan, create and label a graph (line, pie or bar) to compare something you learned about. (For example, “Animals That Provide Milk for People to Drink”)

**For more information on this topic, please refer to the books below:**

9781633221536	Bird Brains: The Wild & Wacky World of Birds
9781682970256	Bubbling Biology
9781633221543	It’s a Fungus Among Us
9781633221963	Land Mammals of the World
9781633221239	Open Wide
9781847807816	Pattern Play
9780760353509	Smart Lab-Sniffer Academy Dog Detective Game
9781633221673	Up Close: Fur & Feathers